IIEC Exhibit 2.0 Corrected

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Commonwealth Edison Company	:	
	:	
Petition for Approval of the Energy Efficiency and Demand-Response Plan Pursuant to Section 12-103(f) of the Public Utilities Act	:	**Docket No. 07-0540**

Direct Testimony and Exhibit of

David L. Stowe

On Behalf of

Illinois Industrial Energy Consumers

December 14, 2007
Project 8861

BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Commonwealth Edison Company	:	
	:	
Petition for Approval of the Energy Efficiency and Demand-Response Plan Pursuant to Section 12-103(f) of the Public Utilities Act	:	**Docket No. 07-0540**

Direct Testimony of David L. Stowe

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A My name is David L. Stowe. My business address is 1215 Fern Ridge Parkway, Suite 208; St. Louis, Missouri 63141.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation with Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A This is summarized in Appendix A to my testimony.

Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

A I am appearing on behalf of the Illinois Industrial Energy Consumers ("IIEC"). The IIEC is an ad hoc group of industrial customers eligible to take power and energy or delivery service from Commonwealth Edison Company ("ComEd" or "Company").

Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A The purpose of my testimony is to describe my methods for determining the program costs associated with the customer classes proposed by IIEC witness Stephens. I will also describe how I developed charges to recover those program costs from the three classes.

Q PLEASE SUMMARIZE YOUR TESTIMONY.

A My testimony can be summarized as follows:

1. Based on my review, it appears that the incentives and program administration costs (collectively "program costs") can be attributed to the Residential, Small C&I, and Large C&I customer classes, as those classes are defined by Mr. Stephens.

2. If the Commission accepts IIEC's method of recovery of program costs from the various customer classes, the program costs can be recovered via the class differentiated energy charges that I have developed.

IIEC Cost Recovery Mechanism Recognizes Commercial and Industrial Class Differences

Q PLEASE DESCRIBE YOUR UNDERSTANDING OF COMED'S ENERGY EFFICIENCY PLAN AS IT RELATES TO CUSTOMER CLASS DIFFERENTIATION.

A As IIEC witness Stephens has shown in his direct testimony, ComEd's proposed Energy Efficiency and Demand Response Plan ("Plan") is designed to provide Energy Efficiency benefits to specific classes of customers, and to recover the costs of the Plan in proportion to each class's annual energy use. As proposed, ComEd's Plan recovers a disproportionally small amount of revenue from Residential customers as compared to the cost of Energy Efficiency incentives offered them, and a disproportionally large amount of revenue from Large C&I customers, with a peak

demand over one megawatt (MW), as compared to the cost of incentives offered them.[1]

Q HOW DOES THE COST RECOVERY MECHANISM OFFERED BY THE IIEC DIFFER FROM THE COMPANY'S PLAN DESCRIBED ABOVE AND IN IIEC WITNESS STEPHENS' TESTIMONY?

A The cost recovery mechanism offered by the IIEC differs from ComEd's Plan in three important ways.

First, for purposes of identifying Energy Efficiency *program costs*, the IIEC's approach recognizes three classes of customers: (1) Residential, (2) Small C&I, and (3) Large C&I. The Company's Plan recognizes only two classes for program deployment -- Residential and C&I.

Second, for purposes of recovery of these program costs, the cost recovery mechanism offered by IIEC attempts to recover from each class the costs of the programs associated with that class. The IIEC's approach will not require Residential customers to pay any portion of the incentives offered only to commercial or industrial customers, nor will it require commercial and industrial customers to pay any portion of the incentives offered solely to Residential customers.

In contrast, the Company's Plan recovers program costs as a single price per kilowatthour (¢/kWh) based on total energy delivered. The Company's Plan does not attempt to identify the beneficiaries or cost-causers of various program costs, nor does it prevent one customer class from subsidizing another. In doing so, the Company's Plan recovers program costs as if all customers comprised a single customer class.

[1] C&I customers with peak demand less than 1 MW are defined as Small C&I.

Finally, the IIEC cost recovery mechanism recovers the cost of administering the Plan, and common costs that benefit all customer classes, in proportion to each class's identifiable program costs. This differs from the Company's Plan, which allocates these common costs on the basis of energy, and as if all customers comprised a single customer class.

Determination of Energy Usage Associated With the Three Classes

Q WHAT IS THE SOURCE OF THE DATA YOU USED TO IDENTIFY AND SEPARATE THE ENERGY VALUES OF THE THREE CUSTOMER CLASSES USED IN IIEC'S PROPOSED COST RECOVERY MECHANISM?

A I relied on data provided by Company witness Paul R. Crumrine on ComEd Exhibits 5.1 and 5.3.[2]

Q WERE YOU ABLE TO SELECT THE DATA YOU NEEDED FROM THESE EXHIBITS?

A In certain instances, yes. I was able to determine the annual class energy for 2006, 2007, and 2008 for Residential, Small C&I, and Large C&I classes simply by combining the rate class data provided in Company exhibits.

The projected data for 2009 and 2010, however, were not so readily available and required both the interpolation and extrapolation of the data. Because of this, I will focus the majority of my testimony on 2008, which is the first year of the Energy Efficiency plan. I will describe the interpolation and extrapolation techniques used for subsequent years in Appendix B at the end of my testimony.

[2]ComEd Exhibit 5.1 provided the projected retail revenue and energy values for 15 classes of customers for 06/06–05/07, 06/07–05/08, and 06/08–05/09. ComEd Exhibit 5.3 provided projected total retail energy for 06/09–05/10, and 06/10–05/11.

82 **Q WHAT DATA DID THE COMPANY PROVIDE, AND HOW WERE YOU ABLE TO**
83 **DETERMINE CLASS DATA FROM THEM?**
84 A The source data is restated in IIEC Ex. 2.1 which replicates the data values from
85 Company witness Crumrine's Ex. 5.1. I grouped and subtotaled the data so that
86 annual energy can be identified for Residential, Small C&I, and Large C&I classes.

87 **Q WERE YOU ABLE TO IDENTIFY THE PERCENTAGE OF TOTAL ENERGY THAT**
88 **THE RESIDENTIAL, SMALL C&I, AND LARGE C&I CLASSES REPRESENT?**
89 A Yes, I was. The ComEd data included actual and projected delivered energy
90 quantities for each class. As I grouped the various residential, business, and lighting
91 classes into the three classes of my study, I was able to include their delivered
92 energy values as well. After the classes were grouped into Residential, Small C&I,
93 and Large C&I, I was able to determine class energy. Table 1 shows the percentage
94 of total energy represented by each of the three classes for 2006, 2007, and 2008.

TABLE 1

Historical and Projected Class Energy for IIEC's Classes

Distribution Delivery Class	2006 Estimated Energy Delivered (MWh)	2007 Projected Energy Delivered (MWh)	2008 Projected Energy Delivered (MWh)
Residential	31.5%	31.3%	31.3%
Small C&I	36.8%	37.1%	37.3%
Large C&I	31.7%	31.6%	31.5%
Total for all Retail Customers	**100%**	**100%**	**100%**

Q WHAT PORTIONS OF THE COMPANY'S PLANNED PROGRAM COSTS WILL BE RECOVERED FROM THE RESIDENTIAL AND C&I CLASSES IN 2008 UNDER THE COMPANY'S PLAN?

A The Company's Plan states that $39.4 million will be spent on Energy Efficiency incentives and costs in 2008. I determined the percentage of the $39.4 million that the Company will recover from the Residential, Small C&I, and Large C&I classes by multiplying $39.4 million by each percentage value shown in the far right hand column of Table 1 column. I determined that $12.3 million will be recovered from the Residential class, $14.7 million will be recovered from the Small C&I class, and $12.4 million will be recovered from the Large C&I class.

IIEC's Determination of Program Costs for Customer Classes

Q WHAT DATA DID YOU USE TO DETERMINE THE PROGRAM COSTS FOR EACH OF THE THREE CUSTOMER CLASSES USED IN THE IIEC COST RECOVERY MECHANISM?

A I used Table 2, titled "Portfolio Description" on page 5 of the Company's Plan.

Q HOW DID YOU DETERMINE THE AMOUNT OF PROGRAM COSTS THAT SHOULD BE RECOVERED FROM EACH CLASS?

A Using the Company's Table 2 from page 5 of the Plan, along with the Appendices filed with the Plan, I was able to identify the cost of programs designed for Residential customers, C&I customers, and costs (such as administrative costs) that applied to all customers. I separated the program costs into groups by: (1) Residential, (2) C&I, and (3) Common.

Using a spreadsheet program for efficient data analysis, I assigned the costs of each C&I program to Small C&I, and Large C&I sub-groups. The three-column block of spreadsheet cells I developed contains in the first column a description of each C&I program. In the column to the right of the program description, is the percentage of program costs I determined is applicable to Small C&I customers. The third column automatically calculates the remaining percentage of program costs, which is assigned to the Large C&I customers.

For example, if the C&I Prescriptive program applied equally to the Small C&I and Large C&I customers, the phrase "C&I Prescriptive" would be entered in a cell in the "Program Description" column. In the column to the left of the description, a percentage value would be entered - in this case, 0.5 or 50% to indicate that 50% of the C&I Prescriptive costs are applicable to the Small C&I class. The value in the "Large C&I" column automatically updates with 50% to indicate that the remainder of the C&I Prescriptive costs are applicable to the Large C&I class.

This block allows the division of the program cost into Small and Large C&I percentages in increments as small as a fraction of one percent. This tool is necessary since the Company's Plan has combined Energy Efficiency measures for Commercial customers with those pertaining to Industrial customers.

Using these methods, I was able to calculate the program costs applicable to Residential, Small C&I, and Large C&I groups for every program *except* the "portfolio costs" which are essentially administrative or common costs.

In the final step, I allocated the portfolio costs to the Residential, Small C&I, and Large C&I classes based on each group's percentage of assigned program costs, as determined in the previous steps.

Q HOW DID YOU DETERMINE THE PERCENTAGE OF COSTS THAT WOULD BE APPLICABLE TO THE SMALL C&I AND LARGE C&I CLASSES?

A The Company filed Appendix B, "Measure Information," as part of their Plan. This Appendix contains hundreds of rows of data that pertain to the individual measures examined by the Company. When a measure was found to have a "Total Resource Cost" or TRC above a benchmark level, that measure is indicated in two different ways. First the measure's TRC is highlighted in yellow. Second, the number '1' is placed in a column labeled "Include." A column labeled "Program" indicates the program in which the measure is included.

I was able to import this data into a spreadsheet where I could quickly find and identify the measures associated with each C&I Program. I could also determine if the program exceeded the TRC threshold by placing a filter on the "Include" column. Finally, I was able to review a column labeled "SubDivision" which provided more detailed information regarding each measure's end-use application. With the data imported into this spreadsheet, I was able to calculate the percentage of measures in each C&I program that was associated with industrial or commercial applications. I used the number of measures applicable to commercial and industrial applications as a guide in determining the program cost percentages for the Small C&I and Large C&I classes.

Q IS A SIMPLE COUNT OF THE NUMBER OF MEASURES ABSOLUTELY DETERMINATIVE OF THE LEVEL OF PROGRAM COSTS THAT WILL ATTRIBUTABLE TO THE SMALL C&I AND LARGE C&I CLASSES?

A No, but it is a reasonable guide for estimation purposes. The ComEd Plan lists the measures and the incremental costs of each measure. However, the Company does

not, and cannot, tell us how many of each measure will actually be deployed. Examination of the measures and the target customers, as I have done, certainly provides more insight as to the likely participation of the Small C&I class members versus the Large C&I class than does no evaluation at all.

It must be remembered that the goal of the estimation effort is to predict information that will become more knowable in the future, that is, how much of the total cost of a particular program will be caused by one class compared to another. The Company's Plan simply does not provide the costing and saturation data necessary to conduct a precise and accurate prediction, even if such a theoretical prediction could be made. My estimates are reasonable proxies for this.

With that said, and while I believe my estimates to be reasonable and supportable, I certainly am willing to consider other approaches to estimating program costs by class put forth by other parties.

Q WHICH PROGRAM COSTS DID YOU APPLY TO THE RESIDENTIAL CLASS?

A I applied the costs of the following programs to the Residential class.[3] By definition or description, these are clearly associated with Residential customers.

- Residential Lighting Program,
- Appliance Recycling Program,
- Residential Multi-family "All Electric" Sweep,
- Residential – HVAC Diagnostics & Tune-up,
- Residential New HVAC w/Quality Installation,
- Single Family Home Performance,
- Residential Advanced Lighting Package,

[3]See Table 2, Portfolio Description, page 5 of the Company's Plan for a listing of ComEd's proposed programs.

- Nature First Expansion,
- Energy Star Monthly Billing Usage,
- Low-Income New Construction & Gut Rehab,
- Low-Income Energy Efficient Moderate Rehab,
- Low-Income Energy Efficient Single-Family Remodeling,
- Low-Income Energy Efficiency Direct Install, and
- Low-Income – Admin Costs.

Q WHICH PROGRAM COSTS DID YOU APPLY TO THE TWO C&I CLASSES?

A I applied the costs of the following programs to the Small C&I, and/or Large C&I classes.

- C&I and Public Sector Prescriptive,
- C&I and Public Sector Custom,
- Small C&I CFL Intro Kit,
- C&I and Public Sector Retro commissioning,
- C&I and Public Sector New Construction,
- Lighting For Learning,
- Public Sector – Admin Costs,
- Smart Energy Design Assistance Program, and
- The Large-Customer Energy Analysis Program (LEAP).

Q WHICH PROGRAM COSTS DID YOU CONSIDER AS ADMINISTRATIVE OR COMMON COSTS?

A I considered the costs of the following programs to be common or administrative costs, to be allocated to all classes on the basis of their applicable program costs.

- Educational / Outreach program,
- Efficiency Training, Market Transformation – Admin,
- EIO Interval Data Profiler,
- Portfolio Administration,
- Measurement & Verification (M&V), and
- R&D / Emerging Technologies.

Q HOW DID YOU ALLOCATE C&I AND PUBLIC SECTOR PRESCRIPTIVE PROGRAM COSTS TO THE SMALL C&I AND LARGE C&I CLASSES?

A After reviewing Exhibit 1.0, Appendix B, of the Company's Plan, I found that if the Company's analyses of an individual measure met a certain TRC threshold, ComEd would include that measure as part of an energy efficiency program. ComEd also identified such measures by placing a value of '1' in a column labeled "Included."

In a spreadsheet, I filtered out all the measures that did not have the number 1 in the 'Included' column. Because the remaining measures were also identified by their associated program, I was able to further filter these measures to include only those associated with the "C&I Prescriptive" program. A total of 557 measures are included in the C&I Prescriptive program. ComEd has further associated each of these measures to a business or facility type in a column labeled "SubDivision" as follows:

Number of Measures	SubDivision
139	Food Sales or Food Service
131	Small or Large Office
109	Small or Large Retail
64	Lodging
59	Healthcare
53	Warehouse and Storage
2	Signals (Traffic or Pedestrian)

The Company's exhibit Ex. 1.0 Appendix A, page A-7 states, "The industrial sector building type was defined as a warehouse and no separate building simulation was conducted." Therefore, only the 53 C&I Prescriptive measures associated with the SubDivision "Warehouse and Storage" are, in any way, applicable to industrial customers and types of facilities typically used by Large C&I customers. Based on these findings, and since only 53 of the 557 measures included in the C&I Prescriptive program apply to Large C&I customer facilities, I allocated 90% of the C&I and Public Sector Prescriptive program costs to the Small C&I class, and the remaining 10% to the Large C&I class.

Q HOW DID YOU ALLOCATE C&I AND PUBLIC SECTOR CUSTOM PROGRAM COSTS TO THE SMALL C&I AND LARGE C&I CLASSES?

A In a manner similar to that just described, I filtered the spreadsheet of ComEd measures to show only those with that were associated with the C&I Custom program, and which had TRC values high enough to be included in the program as indicated by the value of '1' in "Included" column. 76 measures met these criteria. I found that all 76 of these measures had the word "Industrial" in the SubDivision column, and again in a column labeled "Special Measure." I concluded from this that all 76 of these measures are specific to industrial customers, but not to commercial

customers. Based on this, I allocated the C&I and Public Sector Custom program costs entirely to the Large C&I class, which generally represents industrial customers.

Q HOW DID YOU ALLOCATE C&I AND PUBLIC SECTOR RETROCOMMISSIONING PROGRAM COSTS TO THE SMALL C&I AND LARGE C&I CLASSES?

A In my review of the program descriptions, and by filtering the spreadsheet of measures in a manner similar to what I've described above, I found 28 measures were included in the C&I Retrocommissioning and Public Sector Retrocommissioning programs. These measures were associated with a variety of SubDivisions as shown below.

Number of Measures	SubDivision
3	Education
4	Food Sales or Food Service
4	Healthcare
6	Lodging
5	Small or Large Office
3	Assembly, and Warehouse and Storage
3	Retail

As can be seen, only three of 28 measures included in The C&I Retrocommissioning and Public Sector Retrocommissioning programs were applicable to industrial customers, whereas the remainder were commercial, as indicated in the column labeled "SubDivisions." Based on this, I allocated 90% of these costs to the Small C&I and 10% to the Large C&I customer classes.

Q HOW DID YOU ALLOCATE C&I NEW CONSTRUCTION PROGRAM COSTS TO THE SMALL C&I AND LARGE C&I CLASSES?

A In my review of the program descriptions, and by filtering the spreadsheet of measures in a manner similar to what I've described above, I found 2 measures were

included in the C&I New Construction program. Both were applicable to large office facilities as indicated by the "SubDivision" column. Therefore, I allocated 100% of these program costs to the Small C&I class.

Q HOW DID YOU ALLOCATE SMALL C&I CFL INTRO KIT PROGRAM COSTS TO THE SMALL C&I AND LARGE C&I CLASSES?

A In my review of the program descriptions, and by filtering the spreadsheet of measures in a manner similar to what I've described above, I found that 9 measures were included in the Small C&I CFL Intro Kit program. These measures were associated with various Subdivisions as follows:

Number of Measures	SubDivision
3	Food Service
3	Small Office
3	Small Retail

None of these measures are applicable to industrial or Large C&I customers. Therefore, I allocated 100% of the program costs to the Small C&I class.

Q HOW DID YOU ALLOCATE LARGE CUSTOMER ENERGY ANALYSIS PROGRAM COSTS TO THE SMALL C&I AND LARGE C&I CLASSES?

A After my review of the LEAP program description, I allocated these costs entirely to the Large C&I customer class as the program is directed primarily to industrial or manufacturing customers.

302 **Q PLEASE SUMMARIZE THESE RESULTS IN TABULAR FORM.**

303 A See Table 2 below.

TABLE 2

Allocation of Program Costs to C&I Classes

Program	Small C&I	Large C&I
C&I & Public Sector Prescriptive	90%	10%
C&I & Public Sector Custom	0%	100%
Small C&I CFL Intro Kit	100%	0%
C&I & Public Sector Retro-commissioning	90%	10%
C&I & Public Sector New Construction	100%	0%
Large Customer Energy Analysis Program (LEAP)	0%	100%

304 ## Results of Allocation of Program Costs to Classes

305 **Q AFTER YOU IDENTIFIED THE PROGRAMS AND PROGRAM COSTS**
306 **ASSOCIATED WITH THE CLASSES AS DESCRIBED ABOVE, WHAT PROGRAM**
307 **COSTS WERE ALLOCATED TO RESIDENTIAL, SMALL C&I, AND LARGE C&I**
308 **CUSTOMER CLASSES?**

309 A Table 3 shows how the program costs were allocated to Residential, Small C&I, and
310 Large C&I classes for 2008.

TABLE 3

IIEC's Division of Program Costs Between Classes

Class	2008	% of Total
Residential	$17,477,602	44.4%
Small C&I	$15,809,757	40.2%
Large C&I	$6,082,641	15.4%
Totals	$39,370,000	100%

311 **Q HOW DOES YOUR METHOD OF ALLOCATING PROGRAM COSTS COMPARE**
312 **TO THE COMPANY'S PROPOSAL?**

313 A Table 4 shows the Company's proposed Plan and IIEC's method in a side-by-side
314 comparison.

TABLE 4

Company Plan and IIEC cost recovery mechanism Comparison

	Company's Proposal		IIEC's Proposal	
Class	Percent of Energy Delivered	$ Recovered Per Class (Millions)	Percent of Applicable Program Costs	$ Recovered Per Class (Millions)
Residential	31.50%	$12.4	44.4%	$17.5
Small C&I	36.80%	$14.5	40.2%	$15.8
Large C&I	31.70%	$12.5	15.4%	$6.1

Q HAVE YOU CALCULATED THE RATE OR CENTS PER KWH THAT WOULD BE NECESSARY TO RECOVER THESE PROGRAM COSTS FROM EACH CLASS?

A Yes, I have. Table 5 shows the rate that is necessary to recover the program costs proposed by the IIEC's mechanism. The rates shown in Table 5 were calculated using the rate calculation formula in ComEd's Rider EDA.

TABLE 5

Estimated Unit Charges for Cost Recovery (¢/kWh)

Class	2008	2009	2010
Residential	0.06	0.12	0.17
Small C&I	0.05	0.08	0.14
Large C&I	0.02	0.06	0.08

Q BASED ON YOUR REVIEW OF COMED'S RIDER EDA, DO YOU BELIEVE IT COULD BE MODIFIED SUCH THAT IT COULD BE APPLIED ON A MULTIPLE CLASS BASIS?

A Yes, I do. The amount of the adjustment described in Rider EDA is found from the following equation:

$$EDA = \frac{PC - RIC + ARF + ORF}{PE} \times UF \times \frac{100¢}{\$1}$$

Where PC refers to the program costs to be recovered, and RIC refers to reimbursements which the Company receives as part of its Plan, but which are not to be collected through Rider EDA. ARF and ORF are factors applied to correct the over- or under-collection of costs in previous years, and UF is a constant used to account for uncollectible costs. PE refers to the projected energy, in kWh, which the Company expects to deliver during the 12-month billing periods.

Nothing in this calculation requires that all classes of customers be treated as if they were a single class, nor is there a factor or calculation that could not as easily apply to individual classes of customers as it does to all customers as a whole. Therefore, I find no reason to believe that Rider EDA could not be applied to multiple classes of customers.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

Appendix A: Qualifications of David L. Stowe

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A David L. Stowe. My business address is 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation with the firm of Brubaker & Associates, Inc. (BAI), energy, economic and regulatory consultants.

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I was graduated from the Kansas State University's College of Electrical and Computer Engineering in 1987, with a Bachelor of Science degree in Electrical Engineering. Following my graduation, I worked with the Kansas Corporation Commission (KCC) as a Utilities Engineer. My responsibilities included the review and engineering analysis of utility filings, investigations of compliance with the Commission's Orders and State laws, and filing and defending testimony regarding those finds. In addition, I served as Geographic Information Systems Coordinator as the KCC digitized and automated its utility facilities and territory maps from the original velum sheets.

In April of 1993, I accepted a position with the Missouri Public Service Commission (MPSC) where, again in the capacity of a Utilities Engineer, I focused primarily on depreciation, jurisdictional allocations, and production cost modeling. My employment with the MPSC also allowed me to complete the requirements for

Professional Engineer registration. I acquired my certificate for Professional Engineering registration in 1996.

From October 1995 until January 2002, I developed my expertise in computer engineering and communications; first acting as a Unix System Administrator and Oracle DBA with Kansas City Power and Light, and later offering both hardware and software consulting services to corporations with enterprise-wide application requirements with Digital Equipment Corporation and Compaq. During this time, I was also the president and owner of a company that installed analog and digital communication systems in cellular phone towers.

In January of 2002, I joined the Analytic Services Department of Aquila, Inc. as a Senior Regulatory Analyst, where I was primarily responsible for developing and maintaining cost of service models for each of Aquila's electrical territories. In addition, I was solely responsible for completing associated engineering studies to determine the primary and secondary portions of each subsidiaries' distribution systems, calculating the zero intercept values for the subsidiaries' poles, conductors, conduits, and transformers, performing customer impact analyses, and assisting in rate design.

In October of 2007, I joined Brubaker & Associates, Inc. as a consultant. Since that time, I have assisted on cost of service, revenue requirement, and tariff issues in Montana, Wyoming, and New York.

I have testified before the State Public Service Commissions of Kansas, Missouri, and Colorado.

In addition to our main office in St. Louis, the firm has branch offices in Phoenix, Arizona and Corpus Christi, Texas.

Appendix B

All of the data I used in my analysis came from ComEd's Plan and two exhibits filed by ComEd witness Paul Crumrine. Specifically, ComEd Ex. 5.1 contained energy delivery estimates or projections, as well as estimated or projected revenue estimates, for 2006, 2007, and 2008 by customer class. ComEd Ex 5.3 contained total system delivered energy projections for 2008, 2009, and 2010.

Since much of the issue of this case pertained to 2008 (i.e., the initial year of ComEd's Energy Efficiency and Demand Response Plan ("Plan")), I was able to perform some of my analysis using the data from ComEd Ex. 5.1 alone. However, to complete a full analysis, it was necessary to expand the data provided in ComEd Ex. 5.3, in such a way that it gave reasonable estimates of the individual class data that comprise the total. Doing so required that there be both interpolations, and extrapolations of the data provided by ComEd. The purpose of this appendix is to explain these processes.

The data contained in ComEd Ex. 5.1 provided delivered energy estimates and projections from 2006 to 2008 *by customer class*. This data was extremely useful in my analysis of the initial year of ComEd's Plan. However, to fully analyze the impact of the Plan in the upcoming years, it was necessary to make reasonable estimates of revenues and energy deliveries by class beyond 2008.

ComEd Ex. 5.3 provided *total system* delivered energy projections for 2009 and 2010. However, by combining the data in ComEd Ex. 5.3 with the data provided in ComEd Ex. 5.1, it became possible to estimate the class data that comprised the 2009 and 2010 totals.

Conceptually, this is accomplished by first analyzing the class data for 2006, 2007, and 2008 to determine if trends or patterns exist within the individual classes. If

406 such trends or patterns exist, the next step is to continue these trends into the years 2009
407 and 2010. The assumption is that the contribution to total system energy by individual
408 classes will remain, for the next few years, about the same as the last few years, and that
409 if a class' contribution to total system energy has been trending either upward or
410 downward, that trend will continue for the next few years, as it has in the past.

411 The final step in the process is to verify that the total system delivered energy
412 achieved by combining the extrapolated class data matches the delivered energy
413 projections provided in ComEd Ex. 5.3 for 2009 and 2010.

414 Table B-1 summarizes the class data derived from ComEd Ex. 5.1. It can be
415 seen that the percentage of total system energy contributed by the Residential and Large
416 C&I classes are slightly above 31%, and are declining very slightly each year. The Small
417 C&I class, however, contributes nearly 37% to total system energy and this percentage is
418 increasing at about 0.2% each year.

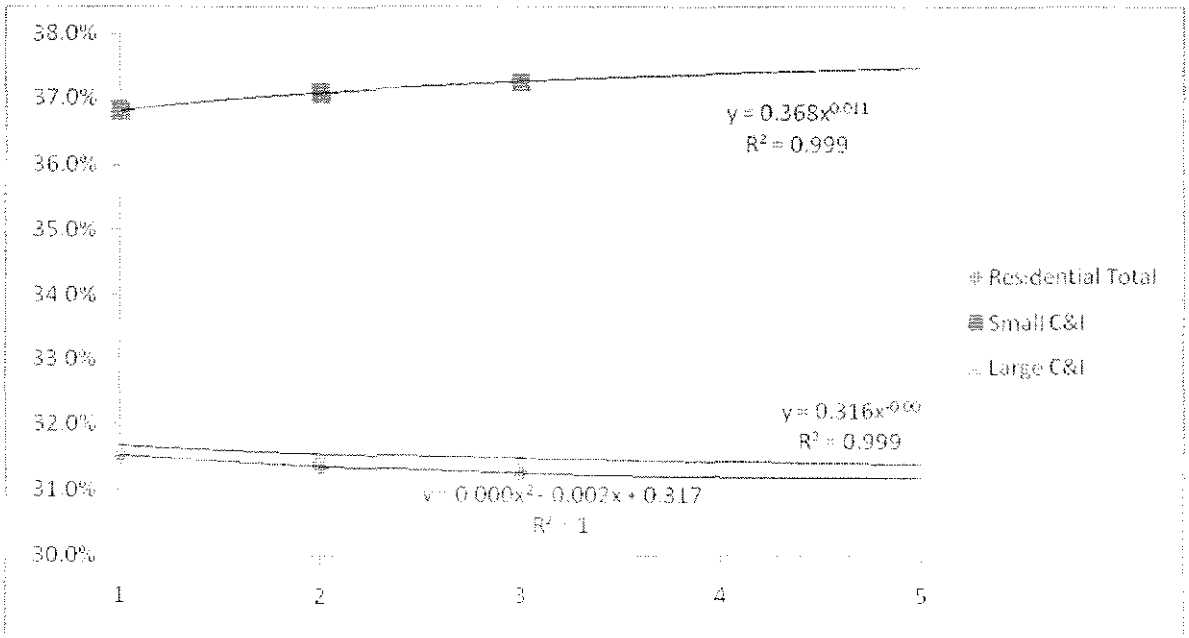
TABLE B-1

Summary of Data Derived from ComEd Ex. 5.1

	2006		2007		2008	
Distribution Delivery Class	Estimated Energy Delivered (MWh)	% of Total	Projected Energy Delivered (MWh)	% of Total	Projected Energy Delivered (MWh)	% of Total
Residential	28,873,622	31.53%	29,222,002	31.37%	29,299,949	31.26%
Small C&I	33,700,903	36.80%	34,546,094	37.08%	34,920,735	37.25%
Large C&I	29,008,498	31.67%	29,395,408	31.55%	29,516,922	31.49%
Total System	**91,583,023**		**93,163,504**		**93,737,606**	

I plotted the percentage contributions of each class and for each year, and then calculated the trendline through each set of data, extrapolating the trend line two years into the future. The results are shown in Figure 1 below.

Figure 1: Class Contributions to Total Energy – Trends from 2006 through 2010



Using the equation associated with each class' trend line, I substituted the "years from start" number (at the bottom of the chart) for the 4th and 5th years, for the 'x' values. The resulting class contributions to the total delivered energy are shown in Table B-2.

TABLE B-2

Class Contribution to Delivered Energy
Projected Years 4 & 5 (2009 & 2010)

Year	Residential Total	Small C&I	Large C&I	Total
1	31.53%	36.80%	31.67%	100.00%
2	31.37%	37.08%	31.55%	100.00%
3	31.26%	37.25%	31.49%	100.00%
4	**30.90%**	**37.37%**	**31.60%**	**99.87%**
5	**30.70%**	**37.46%**	**31.60%**	**99.76%**

The total of the class contributions is very slightly less than 100%. This is the result of the trend line equations displaying rounded and truncated numerical values, rather than carrying these values to the 5th, 10th, or 30th decimal point. Since I entered the equations precisely as displayed, this was expected. To adjust for this, I increased the contribution of each class by equal percentages. (Mathematically, this means I multiplied the trend line equations by the value (1 + Loss%), and recalculated the class contribution percentages.) The results are shown in Table B-3.

TABLE B-3

Corrected Class Contributions
to Projected Delivered Energy

Year	Residential Total	Small C&I	Large C&I	Total
1	31.53%	36.80%	31.67%	100.00%
2	31.37%	37.08%	31.55%	100.00%
3	31.26%	37.25%	31.49%	100.00%
4	**30.94%**	**37.42%**	**31.64%**	**100.00%**
5	**30.77%**	**37.55%**	**31.68%**	**100.00%**

Commonwealth Edison Company
Docket No. 07-0540

Estimated and Projected Data Re-stated from Company's Ex. 5.1 and Organized into Residential, Small C&I, and Large C&I Classes.

Distribution Delivery Class	6/06 - 5/07 Estimated Retail Revenues ($)1	6/06 - 5/07 Estimated Energy Delivered (MWH)	6/06 - 5/07 Average Total Cost for Electric Service (¢/kWh)	6/07 - 5/08 Projected Retail Revenues ($)1	6/07 - 5/08 Projected Energy Delivered (MWH)	6/07 - 5/08 Average Total Cost for Electric Service (¢/kWh)	6/08 - 5/09 Projected Retail Revenues ($)1	6/08 - 5/09 Projected Energy Delivered (MWH)	6/08 - 5/09 Average Total Cost for Electric Service (¢/kWh)
Single Family Without Electric Space Heat	$2,379,989,804	21,810,757	10.912	$2,444,392,787	22,246,021	10.988	$2,467,124,420	22,294,636	11.066
Multi Family Without Electric Space Heat	$451,321,514	4,411,745	10.230	$535,464,610	4,486,507	11.935	$532,495,052	4,458,264	11.944
Single Family With Electric Space Heat	$57,411,812	843,795	6.804	$62,375,803	819,979	7.607	$67,615,112	827,805	8.168
Multi Family With Electric Space Heat	$132,874,534	1,807,325	7.352	$133,509,515	1,669,495	7.997	$147,597,097	1,719,244	8.585
Total Residential	**$3,021,597,664**	**28,873,622**	**10.465**	**$3,175,742,715**	**29,222,002**	**10.868**	**$3,214,831,681**	**29,299,949**	**10.972**
Watt-Hour	$119,691,182	1,148,227	10.424	$65,997,929	515,770	12.796	$70,568,043	554,693	12.722
Small Load (0 to 100 kW)	$1,017,911,852	11,325,232	8.988	$1,101,067,539	11,802,632	9.329	$1,120,606,533	11,755,025	9.533
Medium Load (100 kW to 400 kW)	$828,716,018	10,523,378	7.875	$920,382,524	11,146,694	8.257	$991,199,424	11,267,471	8.797
Large Load (400 kW to 1 MW)	$772,249,460	9,979,962	7.738	$762,308,523	10,354,639	7.362	$876,681,268	10,595,616	8.274
Fixture-Included Lighting	$28,481,159	143,453	19.854	$28,931,124	136,732	21.159	$29,392,698	137,394	21.393
Dusk to Dawn Lighting	$24,965,523	541,082	4.614	$26,342,824	438,025	6.014	$33,688,859	539,108	6.249
General Lighting	$2,926,919	39,569	7.397	$10,160,366	151,602	6.702	$5,503,527	71,428	7.705
Total Small C&I	**$2,794,942,113**	**33,700,903**	**8.293**	**$2,915,190,829**	**34,546,094**	**8.439**	**$3,127,640,352**	**34,920,735**	**8.956**
Very Large Load (1 MW to 10 MW)	$1,373,635,689	19,705,002	6.971	$1,442,904,564	19,695,667	7.326	$1,626,139,443	19,933,065	8.158
Extra Large Load (> 10 MW)	$409,808,176	7,053,497	5.810	$290,150,692	4,356,617	6.660	$327,243,818	4,380,774	7.470
Railroad	$31,967,628	518,955	6.160	$35,975,404	522,291	6.888	$41,116,754	530,060	7.757
High Voltage	$88,767,936	1,731,044	5.128	$281,392,022	4,820,833	5.837	$306,690,499	4,673,023	6.563
Total Large C&I	**$1,904,179,429**	**29,008,498**	**6.564**	**$2,050,422,682**	**29,395,408**	**6.975**	**$2,301,190,514**	**29,516,922**	**7.796**
Total for all Retail Customers	**$7,720,719,206**	**91,583,023**	**8.430**	**$8,141,356,226**	**93,163,504**	**8.739**	**$8,643,662,547**	**93,737,606**	**9.221**

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Commonwealth Edison Company	:	
	:	
Approval of Energy Efficiency and Demand Response Plan Pursuant to Section 12-103(f): of the Public Utilities Act	:	No. 07-0540

AFFIDAVIT

STATE OF MISSOURI :
: SS
COUNTY OF ST. LOUIS :

David L. Stowe, being duly sworn, deposes and states as follows:

1. Affiant is David L. Stowe. He is employed as a consultant by Brubaker & Associates, Inc., St. Louis, Missouri.

2 Affiant is a witness for the Illinois Industrial Energy Consumers ("IIEC") in the subject proceeding.

3. Affiant caused to be prepared corrected direct testimony (IIEC Ex.2.0 Corrected) for submission in this proceeding, on behalf of IIEC. The corrected direct testimony was prepared by him and is his sworn testimony in this proceeding. The corrected direct testimony is true and accurate in all respects.

David L. Stowe
Brubaker & Associates, Inc.
P. O. Box 412000
St. Louis, MO 63141

SUBSCRIBED AND SWORN to before me, a Notary Public, on this 31st day of December, 2007.

MARIA E. DECKER
Notary Public, State of Missouri
St. Louis City
Commission # 05706793
My Commission Expires May 05, 2009

NOTARY PUBLIC